

III. REMARKS

Claims 1-20 are pending in this application. By this response, claims 1, 7, and 14 have been amended to correct a typographical error. Applicants do not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Further, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority in the instant application.

In the Office Action, claims 1-20 are rejected under 35 U.S.C. 102(e) as allegedly being unpatentable over Pazos (US 2005/0068896). Furthermore, claims 2, 9, and 16 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Pazos, in view of Elzur (US 2005/0172342). Reconsideration in view of the following remarks is respectfully requested.

With respect to claim 1, Applicants submit that Pazos fails to disclose each and every element of the claimed invention, including, "generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision." (See claim 1, and as similarly recited in claims 7 and 14.) In support of its rejection, the Office asserts that paragraphs [0005] and [0007] of Pazos disclose this claimed feature. See Office Action, p. 2. In response, Applicants submit that neither paragraph cited by the Office, nor Pazos as a whole discloses, *inter alia*, generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision.

Interpreting Pazos only for purposes of this response, Applicants submit that Pazos discloses, "[a] TCP receiver issues a duplicate ACK whenever an out-of-order segment arrives.

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Hence, all packets received after a lost packet will trigger duplicate ACKs. If packets are not lost, but are simply received out of order, some duplicate ACKs will result.” ¶ [0007] However, Pazos fails to disclose, *inter alia*, generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is *determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision*. (Emphasis added) See claim 1. Accordingly, in the claimed invention, a TCP segment may be dropped due to ULP considerations, e.g., corruption or invalid CRC of DDP segments, even though the TCP segment has passed the TCP checksum (i.e., is valid). See step S9 of FIG. 3. In contrast, conventional procedures, including those disclosed by Pazos, would cause a retransmission attempt of those packets. For example, Pazos discloses that “...when data packets arrive out-of-order, the receiver issues a duplicate ACK. After the source receives a particular number of duplicate ACKs, it will assume that the next data packet in the sequence was lost and retransmits it.” See ¶ 0050. However, in the present invention, even though a second TCP segment has not been received, the transmitter knows that a first TCP segment, a valid TCP segment, was received and dropped due to a ULP consideration. See Specification, ¶ [0089]. As a result, the additional duplicate Ack forces the transmitter to begin the retransmit procedure earlier where a number of duplicate Acks must be received before retransmission begins. *Id.* Pazos, however, fails to disclose this claimed feature. Accordingly, Applicants submit that Pazos fails to disclose each and every feature of the claimed invention, including, generating a first duplicate TCP acknowledgement (Ack) covering a received TCP segment that is determined to be valid by TCP and was dropped by TCP based on an upper layer protocol (ULP) decision. Therefore, Applicants respectfully request withdrawal of the rejection.


Independent claims 7 and 14 were rejected under the same rationale as claim 1. As a result, Applicants herein incorporate the arguments listed above with respect to claim 1.

With respect to dependent claims 2-6, 8-13, and 15-20, Applicants herein incorporate the arguments presented above with respect to the independent claims from which the claims depend. The dependent claims are believed to be allowable based on the above arguments, as well as for their own additional features.

IV. CONCLUSION

Applicants respectfully submit that the Application as presented is in condition for allowance. Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,



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